

**APPENDIX D**

**PERSONNEL TRAINING PLAN**

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## LIST OF ABBREVIATIONS/ACRONYMS

20.4.1 NMAC	New Mexico Administrative Code, Title 20, Chapter 4, Part 1
EDS	Employee Development System
EM&R	LANL's Emergency Management and Response
EMP	Emergency Management Plan
ES&H	environment, safety, and health
FWO	LANL's Facility and Waste Operations Division
KSL	KBR-Shaw-LATA
LANL	Los Alamos National Laboratory
OJT	on-the-job training
PS-13	LANL's ES&H Training Group
PTLA	Protection Technology Los Alamos
RCRA	Resource Conservation and Recovery Act
S-10	LANL's Hazardous Material Response Group
SWRC	LANL's Solid Waste Regulatory Compliance Group
TSF	treatment and storage facility
USC	United States Code

## **APPENDIX D**

### **PERSONNEL TRAINING**

This section describes the personnel training program for Los Alamos National Laboratory (LANL) treatment and storage facility (TSF) workers. Training requirements for treatment, storage, and disposal facility personnel are specified in the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (20.4.1 NMAC) § 264.16, revised June 14, 2000 [6-14-00], and are included in this document, as required by 20.4.1 NMAC § 270.14(b)(12) [6-14-00]. The primary objective of the training program is to prepare personnel to operate and maintain safely those areas managing hazardous and/or mixed waste, in accordance with 20.4.1 NMAC, Subpart V, Part 264 [6-14-00]. This training program applies to all employees of the U.S. Department of Energy, the University of California, and any subcontractors who work regularly at LANL TSFs and manage hazardous and/or mixed waste. The degree of training varies with the job duties.

#### **D.1 HAZARDOUS AND MIXED WASTE MANAGEMENT/RESPONSIBILITIES**

Waste management activities and responsibilities at specific hazardous and/or mixed waste management units are handled by the appropriate LANL division or group. Waste management groups within the Facility and Waste Operations (FWO) Division are responsible for most centralized waste management activities at LANL. The Solid Waste Regulatory Compliance Group (SWRC) is responsible for providing waste management regulatory guidance to all LANL personnel and operations. Other personnel at LANL that may provide assistance in various waste management activities are discussed in the following paragraph and in Appendix E of this document.

Laboratory-contracted support services (e.g., KBR-Shaw-LATA [KSL]) provide trained personnel to assist in waste-handling activities. Personnel in the Health Physics Operations Group, the Occupational Medicine Group, the Industrial Hygiene and Safety Group, the Nuclear Criticality Safety Group, the Occurrence Reporting Group, the Hazardous Material Response Group (S-10), the Meteorology and Air Quality Group, the Water Quality and Hydrology Group, the Ecology Group, and personnel in SWRC are trained in their respective specialties to provide emergency response support. Protection Technology Los Alamos (PTLA) is responsible for LANL security, and provides workers trained in traffic and site-access control.

The Emergency Management and Response (EM&R) Office provides emergency planning and response at LANL and has the overall responsibility for LANL's Emergency Management Plan (EMP) training. The Performance Surety Division ES&H Training Group (PS-13) is responsible for the analysis, design, development, and delivery of LANL-wide environment, safety, and health (ES&H) training. Courses on hazardous and/or mixed waste are designed with substantial input from SWRC and FWO waste management groups, and other subject matter experts, as appropriate.

## D.2 TRAINING CONTENT, FREQUENCY, AND TECHNIQUES [20.4.1 NMAC § 270.14(b)(12) and 20.4.1 NMAC § 264.16(a), (b), (d), and (e)]

The training program instituted at LANL includes a combination of LANL-wide courses, facility-specific training, and on-the-job training (OJT). LANL-wide courses are provided internally or through external vendors and are usually classroom-based. Facility-specific training may be developed and delivered within a particular TSF, and OJT consists of supervised and documented training focused primarily on procedures performed by individual workers. Each of these types of training is described briefly in Sections D.2.1 through D.2.3. All LANL employees and LANL contract and support personnel who handle hazardous and/or mixed waste at TSFs receive the appropriate level of training within six months of their date of hire or transfer for work at a TSF. Personnel will not work in unsupervised waste handling positions at TSFs until they have successfully completed the appropriate level of training for their positions and responsibilities.

Records of LANL-wide training currently sponsored or administered by PS-13 are entered by that group into the Employee Development System (EDS), the official LANL training database. These records document that the required training has been successfully completed by the worker. Training records of former workers are kept for at least three years from the date that they last worked at the TSF. It is required that records documenting successful completion of facility-specific, on-the-job, or externally provided training be kept by the sponsoring LANL organization. LANL will maintain, at a minimum, hard or electronic copies of TSF training records for currently employed workers until the TSF closes.

Table D-1 presents components of the LANL-wide training program as administered through PS-13. This table includes a listing of the relevant training courses, a summary of topics, and a designation of the relevant courses for each job category. Categories of workers presented in Table D-1 include TSF hazardous/mixed waste workers, managers and supervisors of TSF hazardous/mixed

waste workers, emergency responders, and uncontrolled area potential release site workers. Table D-2 summarizes the components of facility-specific training and OJT that workers receive, as applicable. Each training element has been designed to ensure that every worker involved in hazardous and/or mixed waste handling operations is properly trained in the procedures relevant to the positions in which they are employed. Tracking the completion of training is possible through the EDS training plans. If a worker is no longer involved in hazardous and/or mixed waste handling operations, continued training to meet the components of the relevant hazardous waste management program is not required.

TSF Hazardous/Mixed Waste Workers are responsible for handling hazardous/mixed wastes at a TSF. In addition, they are responsible for assisting in TSF spill and emergency response activities, as required.

Managers and Supervisors of TSF Hazardous/Mixed Waste Workers are directly responsible for day-to-day operations related to TSF waste management activities. They are also responsible for assuring that personnel safety and training requirements are met.

Emergency Responders are trained emergency response personnel (e.g., S-10, Technical Area 55 Emergency Response Team) that respond to emergencies (e.g., spills, fires, explosions) involving hazardous and/or mixed wastes. Emergency Responders also provide support for emergency response activities.

Uncontrolled Area Potential Release Site Workers conduct investigations and remedial activities at potential release sites. They are also responsible for proper waste management from generation to disposal, including waste characterization, treatment, and storage.

Training materials of LANL-wide training courses are on file in the ES&H Training Center and are available for review by all hazardous/mixed waste management and handling personnel, emergency response personnel, and regulatory agencies. Course content will be reviewed on a regular schedule and updated as required to keep materials current with hazardous waste management regulations. Alternative forms of training (e.g., paper-based self-study courses, web-based training) may be taken to meet specific training requirements. Such alternate forms of training must be approved by PS-13 personnel and be determined to be equivalent in content to more traditional classroom-based training courses. Files listing the requisite skills, education, and

training for workers who handle hazardous and/or mixed waste and the duties and responsibilities for each job description, as well as the name of each worker filling a job description, are maintained at LANL, as required by 20.4.1 NMAC § 264.16(d)(2) [6-14-00].

#### D.2.1 LANL-Wide Courses

Hazardous waste management courses for TSF personnel include Waste Generation Overview Live Training, Resource Conservation and Recovery Act (RCRA) Personnel Training, and RCRA Refresher Training. Additional LANL-wide courses may be required for specific job functions.

The RCRA Personnel Training course provides an overview of state and federal hazardous waste management regulations and emphasizes compliance with the RCRA requirements that apply to job-related activities, such as the safe handling of hazardous and mixed waste. Instructors are trained in hazardous and mixed waste management programs and procedures and in RCRA (*42 United States Code [USC] § 6901 et seq.*). PS-13, with guidance from SWRC, provides an annual refresher of applicable hazardous waste management requirements. TSF personnel who handle hazardous and/or mixed waste and/or clean up spills or releases of hazardous and/or mixed waste at TSFs and the managers and supervisors of these workers also receive instruction on appropriate topics listed in Table D-1. In addition, personnel responsible for shipping or transporting hazardous and/or mixed waste require supplementary training, as necessary.

#### D.2.2 Facility-Specific Training [20.4.1 NMAC § 264.16(a)(3)]

Waste-handling personnel will participate in facility-specific training at their particular work locations, as appropriate. Table D-2 addresses program requirements that ensure that hazardous and mixed waste management and handling personnel know the specific requirements for their particular facilities and are able to respond effectively to emergencies. Personnel will become familiar with emergency procedures, equipment, and systems at their particular facility, including emergency and monitoring equipment use, inspection, repair, and replacement, as appropriate. In addition, they will receive instruction on contingency plan contents and implementation (as they apply to their particular facility) including, but not limited to, communications or alarm systems, response to fires and explosions at their facility, key parameters for automatic waste-feed cutoff systems, shutdown of facility operations, and response to groundwater contamination incidents.

#### D.2.3 On-the-Job Training



Supervised and documented OJT may be developed and delivered by supervisors or other subject matter experts who are able to evaluate worker proficiency and determine appropriate training for the procedures required of each function-specific position. OJT topics may include implementation of facility-specific procedures, maintenance of operating records, reporting requirements, and TSF-specific inspection requirements. TSF emergency response personnel receive TSF-specific training regarding emergency response and shutdown procedures at the TSF to which they are assigned.

#### D.2.4 Training Coordinator [20.4.1 NMAC § 264.16(a)(2)]

The PS-13 Group Leader directs the LANL-wide ES&H training program. The Group Leader (or designee) serves as the Training Coordinator for LANL-wide waste management training. The Training Coordinator is trained in the operation of hazardous and mixed waste management facilities, waste management practices, and emergency procedures and is responsible for coordinating training courses.

#### D.3 EMERGENCY TRAINING [20.4.1 NMAC § 264.16(a)(3) and (c)]

If called upon by the EM&R Office, additional non-LANL emergency response personnel (e.g., KSL, PTLA) may assist the LANL Incident Commander at the scene of a hazardous or mixed waste emergency. These workers are trained in their specialties (e.g., heavy equipment operation, hazardous material cleanups, traffic control, and security). At all times during an emergency, these workers are coordinated by the Incident Commander in the Incident Command System or by the designated Emergency Manager, as appropriate. Appendix E of this document (the Contingency Plan) provides a more detailed discussion of emergency procedures, personnel, and equipment.

To ensure maximum protection of life and property and to mitigate the consequences of an emergency situation, TSF personnel involved in waste handling and emergency response must be knowledgeable about appropriate building and operating area emergency procedures. These workers receive training in TSF-specific emergency procedures or participate in the LANL-wide emergency training program. Group leaders and immediate supervisors are responsible for ensuring that education and training in TSF-specific emergency procedures are provided to all personnel under their supervision. Training in TSF-specific emergency procedures is given by the operating group. Periodic exercises may be used to familiarize workers with emergency procedures. Training may also be provided to workers through instructional displays or presentations and discussions in safety meetings.

Immediate supervisors ensure that each new or transferred worker is informed on the general and specific emergency procedures related to the work area. The immediate supervisor also ensures that each worker is advised of any changes to emergency procedures and that each worker is provided with an annual refresher of these procedures. The organization that develops and delivers TSF-specific emergency training maintains these training records.

Specialized training is given to personnel assigned special functions or specific emergency duties. Emergency response personnel are required to attend training on the implementation of the RCRA Contingency Plan (Appendix E), spill response, and Occupational Safety and Health Administration emergency response provisions. The EM&R Office provides training related to implementing LANL's EMP. In addition, TSF waste management and handling personnel participate in a training program in which they are instructed in emergency procedures pertinent to their work areas. The operating group is responsible for providing this site-specific instruction.

#### D.4 IMPLEMENTATION OF TRAINING PROGRAMS [20.4.1 NMAC § 264.16(b) and (c)]

Waste Generation Overview Live is an introductory course that provides an overview of federal and state waste management regulations and Laboratory policies and procedures for waste management operations. The training addresses the information needed to identify and properly manage wastes that are subject to hazardous waste regulations in 20.4.1 NMAC, Subpart II [6-14-00].

In addition to Waste Generation Overview Live, all TSF workers who handle hazardous and/or mixed waste are required to complete RCRA Personnel Training and annual RCRA refresher courses. These refresher courses are intended to update personnel on LANL procedures and changes in RCRA (*42 USC § 6901 et seq.*) provisions and 20.4.1 NMAC regulations and to provide them with an overview of their introductory training. Line managers and group leaders are responsible for ensuring that personnel participate in the appropriate introductory and annual training courses.

Table D-1

Los Alamos National Laboratory-Wide Training Program Outline

Courses <sup>a</sup>	TSF <sup>b</sup> Hazardous/Mixed Waste Worker	Manager/Supervisor of TSF Hazardous/Mixed Waste Workers	Emergency Responder	Uncontrolled Area Potential Release Site Worker
<b>HAZWOPER<sup>c</sup>: First Responder (Operations Level)</b> (provides an overview of hazardous materials emergency response, including recognition and identification of hazardous materials and associated risks, required actions, and relationships with other emergency responders)			X <sup>d</sup>	
<b>HAZWOPER: General Site Worker (40 hours)</b> (provides general information on hazardous waste operations and emergency response for general site workers engaged in corrective action, remediation, or decontamination and decommissioning activities)				X
<b>HAZWOPER: Refresher</b> (provides general information on hazardous waste operations)			X	X
<b>RCRA<sup>e</sup> Personnel Training</b> (includes an overview of the Code of Federal Regulations, Title 40, Parts 260-265, 268; the New Mexico Administrative Code, Title 20, Chapter 4, Part 1 (6-14-00); Department of Transportation shipping regulations; internal and external protocol for facility inspections; operating equipment, communication systems, security systems; contingency plan; and emergency equipment use, inspection, and repair)	X	X	* <sub>f</sub>	*
<b>RCRA Refresher Training</b> (includes regulatory and legislative updates, occurrence reports and lessons learned, audit findings, modification/review of the contingency plan; provides required retraining)	X	X	*	*

Table D-1 (Continued)

Los Alamos National Laboratory-Wide Training Program Outline

Courses <sup>a</sup>	TSF <sup>b</sup> Hazardous/Mixed Waste Worker	Manager/Supervisor of TSF Hazardous/Mixed Waste Workers	Emergency Responder	Uncontrolled Area Potential Release Site Worker
<b>Waste Generation Overview Live</b> (includes waste management regulations and policies, definition of hazardous waste, waste minimization, cycle of waste management at Los Alamos National Laboratory, storage and disposal)	X	X	X	X
<b>Respirators: Air-Purifying</b> (provides required annual retraining for operation and inspection of device, changing filters, donning and doffing)	*	*	X	*
<b>Respirators: Self-Contained Breathing Apparatus</b> (provides required annual retraining for operation and inspection, changing compressed air bottles, donning and doffing, safety features, care and cleaning, fitting)	*	*	X	*

<sup>a</sup> Additional training courses (not listed in this attachment) may also be taken by personnel depending on the types of hazards (e.g., chemical) associated with a particular job description.

<sup>b</sup> TSF = Treatment and storage facility

<sup>c</sup> HAZWOPER = Hazardous Waste Operations and Emergency Response

<sup>d</sup> X indicates a required course.

<sup>e</sup> RCRA = Resource Conservation and Recovery Act

<sup>f</sup> \* indicates that a course may be required for specific job tasks and/or work areas.

**Table D-2**

**Outline of Facility-Specific and On-the-Job  
Training for  
Treatment and Storage Facility Operations**

Facility-specific and/or on-the-job training (OJT) is provided to treatment and storage facility (TSF) workers to ensure that operations are performed in a safe manner and that actual job tasks are conducted in accordance with safe operating procedures.

**Facility-specific training** will include, as applicable, the following topics:

- Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment
- Key parameters for automatic waste feed cut-off systems
- Communications or alarm systems
- Response to fires or explosions
- Response to groundwater contamination incidents
- Shutdown of operations.

**OJT** will include the following topics, as applicable:

- Implementation of facility-specific procedures
- Maintenance of operating records
- Reporting requirements
- TSF-specific inspection requirements.

OJT and facility-specific training must be documented by the sponsoring organization and training records must be maintained for a minimum of three years from the date that the trainee last worked at the TSF.